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IN THE CLAIMS

1. (Currently amended) Transceiver apparatus for use in a multi-frequency communication system, comprising:

a signal processor,

an antenna-switch comprising a multi-switch, a transmission-multiplexer and a reception multiplexer, wherein said multiplexers are controllable by the signal processor,

a frequency conversion circuitry having a transmission path and a reception path, wherein each of the paths communicatively connects the signal processor and the antenna-switch, and

an antenna terminal having a plurality of antenna, each antenna having a transmission-connector for connecting the transmission path to the antenna and a reception-connector for connecting the reception path to the antenna, wherein the antenna-switch, controllable by the signal processor, allows multi-frequency operation of the antenna-terminal by combining a transmission-mode and a reception-mode of each of the plurality of antenna,

the signal processor controlling the respective switches of the multiple antennas such that, at a particular instant in time, each of the multiple antennas is configured as either a transmit-only antenna or a receive-only antenna.

2. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the signal processor is an analogue-digital signal processor formed by a direct digital synthesizer driven phase locked loop radio frequency signal generator.

3. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the frequency conversion circuitry comprises at least one of a local oscillator and a power

divider to supply a local oscillator power to the transmission path and/or the reception path.

4. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the frequency conversion circuitry comprises a mixer device for converting the signal between an intermediate frequency and a radio frequency .

5. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the frequency conversion circuitry comprises a direct conversion device for converting the signal between a base band frequency and a radio frequency, in particular by means of an IQ-method.

6. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna switch comprises a matching unit formed as a frequency regulated matching filter in order to provide an optimal matching factor for the antenna.

7. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna switch comprises a bus connection to the signal processor, wherein the bus-connection is formed as a matching network.

8. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna switch further comprises a beam forming matrix device, in particular a Butler-output-matrix selected from the group consisting of: a 4x4, a 8x8 and a 16x16 Butler output matrix.

9. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein matching units are provided inside the Butler-matrix , in particular a modified Butler-output matrix output/input is formed as a frequency regulated matching filter in order to provide an optimal matching factor for the antenna.

10. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the

antenna terminal comprises a patching unit formed as a low-pass-filter to improve the matching of the antenna for different frequencies and/or for different modes of a multi-frequency communication system, in particular of a mobile cellular communication system or a personal communication system.

11. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna terminal comprises a matching unit for the antenna, in particular an LC component , in order to provide an optimal matching factor for the antenna.

12. (Currently amended) Transceiver apparatus as claimed in claim 1, wherein the antenna terminal comprises at least two~~, in particular four,~~ antennas.

13. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna is formed as an s-loop antenna having two ends formed as the transmission connector and/or the reception connector.

14. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna is configured as a copper wired antenna, in particular as a flexible line antenna made of copper.

15. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna is configured as a SMD-planar antenna.

16. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the antenna has a body and the body comprises an integrated patching and/or matching unit .

17. (Currently amended) Transceiver apparatus as claimed in claim 1, wherein ~~the antenna terminal forms a beam of 360 degrees, in particular~~ the antenna beam is formed within a range of 200 degrees .

18. (Previously presented) Transceiver apparatus as claimed in claim 1, wherein the

antenna beam comprises a 90 degree beam, in particular the beam is formed by a 50 degree main beam and two 20 degree side beams .

19. (Canceled)

20. (Currently amended) Method of transceiving a multi-frequency signal in a multi-frequency communication system, comprising the steps of:

processing the signal in a signal processor,

operating an antenna terminal by an antenna-switch comprising a multi-switch, a transmission multiplexer and a reception multiplexer, wherein the multiplexers are controlled by the signal processor, and transceiving the signal by means of at least a selected one of a plurality of antenna of the antenna terminal,

frequency converting the signal in a frequency conversion circuitry wherein frequency converting of the signal in the frequency conversion circuitry is established on a transmission path and a reception path, wherein each of the paths communicates the signal between the signal processor and the antenna switch,

wherein multi-frequency antenna terminal operation is established by combining a transmission-mode of the antenna and a reception-mode of the antenna, controlled by the signal processor, by means of the antenna-switch, and communicating the signal between the transmission path and the selected antenna via the transmission multiplexer and a transmission connector of the antenna and between the reception path and the selected antenna via the reception multiplexer and a reception connector of the selected antenna,

the signal processor controlling the respective switches of the multiple antennas such that, at a particular instant in time, each of the multiple antennas is configured as either a transmit-only antenna or a receive-only antenna.

21. (Currently amended) Method as claimed in claim 20, ~~characterized by~~comprising directly frequency converting the signal in a frequency conversion circuitry between a base band signal and a radio frequency signal .

22. (Currently amended) Method as claimed in claim 20, ~~characterized by~~comprising frequency converting the signal in a frequency conversion circuitry between an intermediate frequency signal and a radio frequency signal.

23. (Previously presented) Method as claimed in claim 20, wherein a reference of an incoming signal is processed in an antenna switch after checking a beam direction and a signal quality, in particular based on a BER-measurement.

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Currently amended) A communications method using a communications transceiver having multiple antennas having respective switches, a transmission path, a reception path, a transmission multiplexer, a reception multiplexer, and a processor, comprising:

the processor controlling the transmission multiplexer and the reception multiplexer such that during transmission the transmission path is coupled to a selected antenna and during reception the reception path is coupled to a selected antenna; and

the processor controlling the respective switches of the multiple antennas such that, at a particular instant in time, each of the multiple antennas is configured as either a transmit-only antenna or a receive-only antenna.

30. (Currently amended) A communications transceiver comprising:

multiple antennas having respective switches;

a transmission path;

a reception path;

a transmission multiplexer coupled to the transmission path and to multiple antennas;

a reception multiplexer coupled to the reception path and to multiple antennas; and

a processor;

wherein the processor controls the transmission multiplexer and the reception multiplexer such that during transmission the transmission path is coupled to a selected antenna and during reception the reception path is coupled to a selected antenna; and

wherein the processor controls the respective switches of the multiple antennas such that, at a particular instant in time, each of the multiple antennas is configured as either a transmit-only antenna or a receive-only antenna.